UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
ONE CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

FACT SHEET

DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT (CWA)

NPDES PERMIT NUMBER: MA0026883

PUBLIC NOTICE START AND END DATES: July 25, 2007 – August 23, 2007

NAME AND MAILING ADDRESS OF APPLICANT:

Mark Chase, President
Avon Custom Mixing Service, Inc.
55 High Street
Holbrook, MA 02343

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Avon Custom Mixing Service, Inc.
55 High Street
Holbrook, MA 02343

RECEIVING WATER: Trout Brook (Taunton River Basin, MA 62-07)

RECEIVING WATER CLASSIFICATION: Massachusetts Class B (Warm Water)

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1. Proposed Action

The above named applicant has applied to the U. S. Environmental Protection Agency (EPA) for re-issuance of a National Pollutant Discharge Elimination System Permit to discharge treated sewage and storm water runoff into the designated receiving water. The previous permit was issued on November 19, 2001. The final permit was appealed. Subsequent to the resolution of the appeal, the permit went into effect on October 1, 2002. The current permit expired on November 18, 2006. EPA received the application for permit re-issuance on September 11, 2006. Since the application for permit re-issuance was considered timely and complete by EPA, the previous permit has been administratively continued until EPA takes action on the re-issuance.

2. Type of Facility

The facility manufactures rubber products. At present, about 20-30 people work at the facility. The discharge contains only treated saniatary sewage from the toilets, sinks, etc. at the facility.

3. Discharge Location and Description

There are two discharges from the facility included in the current permit. Outfall 001 contains the discharge of treated sewage. The treatment system consists of a collection sump and shredder pump, followed by secondary biological treatment. The treatment facility is a small activated sludge plant, with primary solids removal, secondary biological digestion, clarification, and chlorination. The effluent discharges through a V-notch weir into Trout Brook. The treatment system was originally designed for at least 15,000 gallons per day of sewage, but now discharges less than 800 gallons per day.

Outfall 002, also to Trout Brook, included cooling water and storm water runoff. However, the facility no longer discharges cooling water and the applicant has reported that there are no plans for a future cooling water discharge from Outfall 002. Presently, Outfall 002 now only includes storm water from portions of the site on which very little activity occurs. This storm water drainage area does not include any industrial activities subject to storm water permitting regulations. Moreover, available information relating to the site activities indicates that the storm water discharges do not represent a reasonable potential to cause or contribute to water quality standards exceedences. Therefore, the draft permit proposes to remove Outfall 002.

The effluent quality reported on Discharge Monitoring Report (DMR) forms is summarized in **Attachment A**. A map of the facility and discharge locations is shown in **Figure 1**.

4. Receiving Water Description

Trout Brook is designated as a Class B warm water body by the Massachusetts Surface Water Quality Standards (314 CMR 4.06). Class B waters are designated as a habitat for fish, other aquatic life, and wildlife, and for primary and secondary contact recreation. Where designated, they shall be suitable as a source of public water supply with appropriate treatment. They shall be suitable for irrigation and other agricultural uses and for compatible industrial cooling and

process uses. These waters shall have consistently good aesthetic value. [314 CMR 4.05(3)(b)]

Section 303(d) of the Federal Clean Water Act (CWA) requires states to identify those water-bodies that are not expected to meet surface water quality standards after the implementation of technology-based controls and, as such require the development of total maximum daily loads (TMDLs). Trout Brook is on the most recently EPA approved Massachusetts list of waters requiring the development of TMDLs (i.e., 303(d) list or Category 5 of the Massachusetts Year 2004 Integrated List of Waters) for siltation, organic enrichment/low DO, and pathogens. Also, Trout Brook is on the Proposed 2006 CWA 303(d) List for siltation, organic enrichment/low DO, pathogens, suspended solids, and turbidity.

5. Permit Basis: Statutory and Regulatory Authority

The Clean Water Act (CWA) prohibits the discharge of pollutants to waters of the United States without a National Pollutant Discharge Elimination System (NPDES) permit unless such a discharge is otherwise authorized by the CWA. The NPDES permit is the mechanism used to implement effluent limitations and other requirements, including monitoring and reporting, in accordance with various statutory and regulatory requirements established pursuant to the CWA and applicable State statutes and regulations. The regulations governing the EPA NPDES permit program are generally found at 40 CFR Parts 122, 124, 125, and 136.

When establishing NPDES permit requirements, EPA is required to consider, and include limitations in the permit, based on the most stringent of the following concepts: (a) technology-based requirements, (b) water quality-based requirements, (c) anti-backsliding from the limitations and requirements in the current/existing permit, and (d) antidegradation requirements.

Technology-based requirements represent the minimum level of control that must be imposed under Sections 402 and 301 (b) of the CWA and implementing regulations at 40 CFR 125, 133, and 405 through 471. For publicly-owned treatment works (POTWs), technology-based requirements are effluent limitations based on secondary treatment requirements of Section 301(b)(1)(B) of the CWA as defined in 40 CFR 133.102. In situations where promulgated technology-based requirements are not applicable, Section 402(a)(1)(B) of the CWA provides that such limits be based on EPA's judgment. Such limits are referred to as "best professional judgment" (BPJ) limits, and are referenced in 40 CFR 125.3. This facility is not a POTW, but because it is treating domestic sewage, the secondary treatment standards are being used based on BPJ.

Water quality-based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal or state water quality standards. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on federal or state water quality standards. The Massachusetts Surface Water Quality Standards (314 CMR 4.00) contain requirements for conventional and toxic pollutants in order to provide protection for designated uses in the receiving waters. Included in these Standards are provisions that EPA criteria for toxic pollutants, established pursuant to Section 304 (a) of the CWA, shall be used unless site-specific criteria are established. The state will limit or prohibit discharges of pollutants to surface waters to assure that surface water quality standards of the

receiving waters are protected and maintained, or attained.

Anti-backsliding as defined in Section 402(o) of the CWA and implementing regulations at 40 CFR §122.44(l) require reissued permits to contain limitations as stringent or more stringent than those of the previous permit except under specific circumstances defined in the law and regulation.

In accordance with regulations found at 40 CFR Section 131.12, each state must adopt a statewide antidegradation policy to maintain and protect existing in-stream water quality. The Massachusetts Antidegradation Policy is found at Title 314 CMR 4.04. No lowering of water quality is allowed, except in accordance with the antidegradation policy. This applies in situations where a lowering of water quality is being proposed, such as a new discharge or an increased discharge of pollutants at a facility with an existing permit.

6. Effluent Limitations and Monitoring Requirements in the Permit

Since the wastewater being treated is domestic sewage, the secondary treatment standards were used as the basis for effluent limitations on conventional pollutants (BOD_5 and TSS) in the current permit and the proposed permit. The technology-based concentration limits for BOD_5 and TSS are carried forward into the new permit. Since the new discharge flow applied for is less than the discharge flow authorized in the current permit, the BOD_5 and TSS loadings are more stringent than in the current permit.

Current permit limits for pH, dissolved oxygen, fecal coliform bacteria, total residual chlorine, total ammonia, total phosphorus, and whole effluent toxicity were based on the state water quality standards.

The state water quality standards are required to be met in the receiving waters. Those standards allow the use of dilution by the receiving waters for certain types of effluent parameters, using the seven-day, once in ten year, drought flow (7Q10). That drought flow in Trout Brook at the point of discharge is estimated to be 0.00884 cubic feet per second (cfs). The dilution factor is defined as the combined downstream flow of river (at drought flow) and effluent (1500 GPD or 0.00232 cfs), divided by the flow of effluent ([Qr + Qe]/Qe), and is equal to 4.8.

$$DF = (0.00884 \text{ cfs} + 0.00232\text{cfs})/0.00232$$

$$DF = 4.8$$

There is no new information available to recalculate water quality-based permit limitations, so anti-backsliding from the limits in the current permit is used as the basis for the proposed new effluent limitations for pH, dissolved oxygen, fecal coliform bacteria, total residual chlorine, total phosphorus, total ammonia, and whole effluent toxicity.

The rationale for the permit limits is as follows:

Flow – The draft permit proposes to carry forward the average monthly and daily maximum flow

limits from the current permit, 1500 gallons per day (GPD) and 3000 GPD, respectively.

BOD_5 and TSS -- The concentration limits of 30 mg/l, as a monthly average, and 45 mg/l, as a weekly average, are technology-based, using the secondary treatment standards in 40 CFR 133.102. The loading limits of 0.375 lbs/day, as a monthly average, and 0.563 lbs/day, as a weekly average, were calculated using the concentration limits and the average monthly flow limitation. Based on a review of the effluent quality summarized in Attachment A, the facility has performed well for BOD5 and TSS and been well below permit limits.

pH -- The limits, within the range of 6.5 through 8.3 std units, are based on the state water quality standards.

Dissolved Oxygen (DO) -- The draft permit proposes to carry forward the current DO limit of not less than 6.0 mg/l in the discharge. This proposed limit is based on antibacksliding and continued to ensure attainment of state water quality standards. A minimum concentration of DO is needed for fish and other aquatic life.

Fecal Coliform Bacteria -- The draft permit proposes to carry forward the seasonal fecal coliform bacteria limitations from the current permit. These limits are based on attaining Massachusetts Surface Water Quality Standards 314 CMR 4.05(3)(b)(4) for Class B waters and are a geometric mean of 200 colony forming units (cfu)/100 ml for the average monthly limit and 400 cfu/100 ml for the maximum daily limit. The draft permit proposes to continue the weekly monitoring from the current permit.

E. Coli Bacteria -- Although no limitation is proposed at this time, seasonal weekly sampling for E Coli is required to ascertain compliance with the water quality criteria promulgated by EPA on November 16, 2004, for Massachusetts Streams. Massachusetts has since adopted water quality criteria for E Coli, which have not yet been approved by EPA. Upon approval of the State criteria, the federal criteria will no longer apply.

Total Residual Chlorine -- The seasonal limits of 0.053 mg/l, as a monthly average, and 0.091 mg/l, as a daily maximum, are needed to avoid toxicity in the receiving waters which would violate the state water quality standards. Residuals from chlorination can be extremely toxic to aquatic biota if discharged into surface waters at high levels. The limits are unchanged from the current permit and were calculated based on available dilution.

Calculation of the chlorine limitations:

Acute Chlorine Water Quality Criteria = 19 ug/l
Chronic Chlorine Water Quality Criteria = 11 ug/l
7Q10 = 0.00884 cfs
Design Flow = 1500 gpd (0.00232 cfs)
Dilution Factor = 4.8
Chlorine limit = Water Quality Criteria x Dilution Factor
Daily Maximum Chlorine Limit = 4.8 x 19 ug/l = 91.2 ug/l = 0.091 mg/l
Average Monthly Chlorine Limit = 4.8 x 11 ug/l = 52.8 ug/l = 0.053 mg/l

Total Phosphorus -- The draft permit proposes to carry forward the growing-season monthly average phosphorus limit of 0.2 mg/l based on both anti-backsliding and attaining water quality standards. Monitoring and reporting requirements for the non-growing season are continued in the draft permit. Phosphorus is an essential nutrient for aquatic plant growth. The limit is needed to avoid excessive nutrient enrichment and algal growth in the downstream receiving waters.

Total Ammonia -- The draft permit proposes to carry forward ammonia limits of 1 mg/l as weekly and monthly averages, 2 mg/l as a daily maximum, 0.0125 lbs/day as weekly and monthly averages, and 0.0250 lbs/day as a daily maximum, from the current permit. These proposed limits are based on anti-backsliding and are included in the current permit to protect Trout Brook from nutrient enrichment, low DO, and instream toxicity.

Acute Toxicity and Chronic Toxicity -- These whole effluent toxicity measurements are included to provide assurance that there is no unacceptable toxicity in the discharge. Toxicity is regulated under the state water quality standards. The limits of 100% for the LC_{50} (acute toxicity) and 21% for the C-NOEC (chronic toxicity) are unchanged from the current permit. The frequency of analysis is reduced from quarterly to semi-annually as this is a small discharge which has not shown serious whole effluent problems in previous testing.

Copper – The draft permit proposes to carry forward the current monthly average and maximum daily limits for copper, 29 and 42 µg/l, respectively. The current limits are based on aquatic life criteria adopted by Massachusetts and available dilution in Trout Brook. The draft limits are continued to prevent toxicity to aquatic life in Trout Brook.

Other Permit Requirements -- In addition to these specific numerical effluent limitations, the permit contains general limitations to comply with state water quality standards on such things as color, oil sheen, foam, floating or settleable solids, and non-specific toxic chemicals. Also, the secondary treatment requirement of 85% removal of BOD_5 and TSS, along with other general monitoring conditions, is contained in these narrative statements.

Special conditions are included in the permit to insure proper operation and maintenance of the treatment facility and proper handing and disposal of the sludge which is generated from the treatment facility.

7. Essential Fish Habitat

Under the 1996 Amendments to the Magnuson-Stevens Fishery Conservation and Management Act, EPA is required to consult with the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries) if EPA proposes a permit action that may adversely impact any essential fish habitat (EFH). The Amendments broadly define EFH as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity". "Adversely impact" means any impact which reduces the quality and/or quantity of EFH.

EFH is only designated for species for which federal Fisheries Management Plans exist. A NOAA Fisheries website (See http://www.nero.noaa.gov/hcd/webintro.html) contains maps of

designated EFH. In some cases, a narrative identifies rivers and other waterways that should be considered EFH due to present or historic use by federally managed species such as Atlantic salmon.

EPA's review of available EFH information indicates that Trout Brook and the Taunton Watershed are not designated EFH for any federally managed species. Therefore, EFH consultation with NOAA Fisheries is not required.

8. Endangered Species Act

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA) grants authority to and imposes requirements upon Federal agencies regarding endangered or threatened species of fish, wildlife, or plants ("listed species") and habitat of such species that has been designated as critical (a "critical habitat"). The ESA requires every Federal agency, in consultation with and with the assistance of the Secretary of Interior, to insure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) administers Section 7 consultations for freshwater species, where as the National Marine Fisheries Service (NMFS) administers Section 7 consultations for marine species and anadromous fish.

As the federal agency charged with authorizing the discharge from this facility, EPA has reviewed available habitat information developed by the Services to see if one or more of the federal endangered or threatened species of fish, wildlife, or plants may be present within the influence of the discharge. EPA has concluded that no federally-listed or proposed, threatened or endangered species or critical habitat, under the jurisdiction of the USFWS or NMFS, are known to occur in the in the receiving waters identified in this permit. EPA is seeking concurrence with this opinion from the Services. A copy of the Draft Permit and Fact Sheet has been provided to both USFWS and NMFS for review and comment.

9. State Certification Requirements

EPA may not issue a permit unless the State Water Pollution Control Agency with jurisdiction over the receiving waters certifies that the effluent limitations contained in the permit are stringent enough to assure that the discharge will not cause the receiving water to violate State Water Quality Standards. The staff of the Massachusetts Department of Environmental Protection (MassDEP) has reviewed the draft permit. EPA has requested permit certification by the State pursuant to 40 CFR 124.53 and expects that the draft permit will be certified.

10. Comment Period, Hearing Requests, and Procedures for Final Decisions

All persons, including applicants, who believe any condition of the Draft Permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to Mark Voorhees, U.S. EPA, Office of Ecosystem Protection**,** 1 Congress Street, Suite 1100, Boston, Massachusetts 02114-2023. Any person, prior to such date, may submit a request in writing for a public hearing to

consider the Draft Permit to EPA and the State Agency. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public meeting may be held if the criteria stated in 40 C.F.R. § 124.12 are satisfied. In reaching a final decision on the Draft Permit, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after any public hearings, if such hearings are held, the EPA will issue a Final Permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the Final Permit decision, any interested person may submit a petition for review of the permit to EPA's Environmental Appeals Board consistent with 40 C.F.R. § 124.19.

11. EPA and State Contacts

Additional information concerning the draft permit may be obtained between the hours of 9:00 a.m. and 5:00 p.m., Monday through Friday, excluding holidays from:

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Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency

Date: _____

AVON CUSTOM MIXING SERVICE INC
NPDES Permit MA0026883
DMR Summary

Pipe 1: Sanitary Wastewater

Date	# Meas./ Month	OXYGEN, DISSOLVED	BOD, 5-DAY (20 DEG. C) (Effluent Gross Value)		pH		SOLIDS, TOTAL SUSPENDED		NITROGEN, AMMONIA TOTAL	NITROGEN, AMMONIA TOTAL (AS N) (Effluent Gross Total)			PHOSPHORUS, TOTAL (AS P)	FLOW		CHLORINE, TOTAL RESIDUAL	
		Min	Min	Average	Min	Max	Min	Average	Average	Min	Average	Max	Min	Average	Max	Min	Max
31-Mar-06		6.2	3	4.3	6.9	7.2	3	7.33					0.6	800	800		
28-Feb-06		7.2	4	6	6.5	6.8	4	4.6					0	800	800		
31-Jan-06		6.2	2	3	6.6	6.8	0	2.25					0	<800	<800		
31-Dec-05		6	0	1.4	6.6	6.8	3	5.2					0	800	800		
30-Nov-05		6	0	1.75	6.7	7.2	3	3.5					0	800	800		
31-Oct-05		7.2	0	2	6.8	7.2	0	0	0.009	0	0.36	0.7	0	<800	<800	0	0
30-Sep-05		7.2	3	3.8	6.8	7.4	0	0	0.0035	0	0.28	0.6	0	<800	<800	0	0
31-Aug-05		6.6	0	3	6.7	7.2	0	0	0.002	0	0.175	0.4	0	800	800	0	0
31-Jul-05		6.3	2	2.1	6.8	7.1	0	0	0.005	0.3	0.43	0.5	0	<800	<800	0	0.02
30-Jun-05		6.2	0	0	6.6	7.4	0	0	0.009	0.4	0.76	0.9	0	800	800	0	0
31-May-05		6.8	0	0	6.9	7.4	0	0	0.0087	0.7	1	1.3	0	<800	<800	0.01	0.03
30-Apr-05		6.38	0	0.4	6.7	7.2	0	0		0	0.8	1.3	0	<800	<800	0.03	0.2
31-Mar-05		6.2	3	2.4	6.8	7.1								<800	<800		
28-Feb-05		6.1	4	4.5	6.7	6.9								600	800		
31-Jan-05		6	2	3.6	6.6	6.8								<800			
31-Dec-04		6	5.75	5.75	6.8	7.4								<800	<800		
30-Nov-04		6.3	5.75	5.75	6.8	7.1											
31-Oct-04		6.2	4	4	7	7.8			0.0125	1	2.05	3		900			
30-Sep-04		6.2	6	6.6	6.8	6.9			0.0087	0.7	1.25	1.3		800	1000	0.03	0.05
31-Aug-04		6	5	5	7.2	7.4			0.019	1.55	1.55	1.7	0.15	670	1340		
31-Jul-04		6	5.8	8.9	7.2	7.4	5.8	7.2	0.027	2.17	2.17	2.17	0.18	480	960	0	0
30-Jun-04		1.7	5.8	5.8	7.2	7.4	8.5	8.5		6.46	6.46	6.46	0.45			0	0
Min		1.7	0	-	6.5	-	0	-	-	0	-	-	0	-	-	0	-
Average		-	-	3.64	-	-	-	2.76	0.01	-	1.44	-	-	750	-	-	-
Max		-	-	-	-	7.8	-	-	-	-	-	6.46	-	-	1340	-	0.2

Pipe 1: Outfall 001

Date	# Meas./ Month	COPPER, TOTAL (AS CU) Min	COPPER, TOTAL (AS CU) Max	LC50 STAT 48HR ACU Min	LC50 STAT Min	NOEL STAT Min	NOEL STAT Min
31-Mar-06		0	0				
31-Jan-06		0	0				
31-Dec-05		0	0				
30-Nov-05				100	100	93.3	80
30-Sep-05		0	0				
31-Aug-05				100	100	100	100
30-Jun-05		0	0				
31-May-05				100	100	100	88.3
28-Feb-05				100	100	100	98.3
30-Nov-04				100	100	100	98.3
31-Aug-04				100	100	100	98.3
Min		0	-	100	100	93.3	80
Average		-	-	-	-	-	-
Max		-	0	-	-	-	-

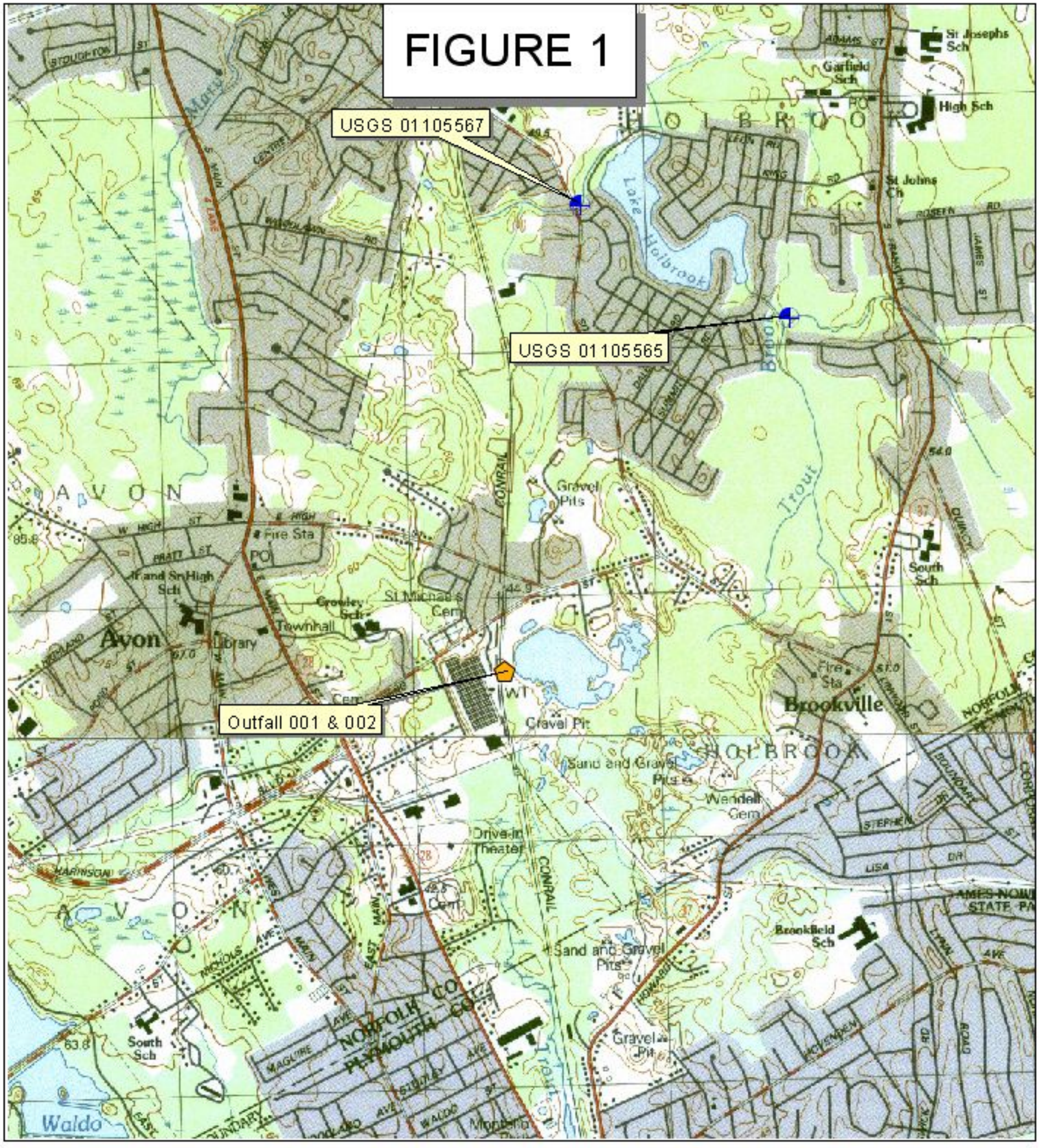
Pipe D02: Outfall 002

Date	# Meas./ Month	TEMP, WATER Max	SOLIDS, TOTAL SUSPENDED Min	SOLIDS, TOTAL SUSPENDED Max	OIL & GREA Max	FLOW Avera	FLOW Max	ZINC, TOTAL Min
31-Mar-06		42		5	0	200	200	0
28-Feb-06		38	0	0	0	<200	<200	
31-Jan-06		32	0	0	0	<200	<200	
31-Dec-05		35	0	0	0	<200	<200	0
30-Nov-05		38	2	2	0	<200	<200	
31-Oct-05		62		0	0	200	200	
30-Sep-05		78	0	0	0	<200	<200	0
31-Aug-05		72	0	46	0	<200	<200	
31-Jul-05		72	0	0	0	<200	<200	
30-Jun-05		76	0	0	0	<200	<200	0
31-May-05		42	0	0	0	<200	<200	
30-Apr-05		52	0	0	0	<200	<200	
31-Mar-05		33				<200	<200	
28-Feb-05		34				<200	<200	
31-Jan-05		38						
31-Dec-04		48				<200		
30-Nov-04		52				<200		
31-Oct-04		65				<200		
30-Sep-04		68				200	200	0.017
31-Aug-04		71						
31-Jul-04		67	6.2	6.2	0			
30-Jun-04		78	0	0	0			
Min		-	0	-	-	-	-	0
Average		-	-	-	-	200	-	-
Max		78	-	46	0	-	200	-

Pipe W02: Outfall 002

Date	# Meas./ Month	TEMP, WATER Max	SOLIDS, TOTAL SUSPENDED Min	SOLIDS, TOTAL SUSPENDED Max	OIL & GREA Max	FLOW Average	FLOW Max
31-Oct-05		62		0	0	300	300
30-Apr-05		50	0	0	0	400	400
30-Sep-04		68					
Min		-	0	-	-	-	-
Average		-	-	-	-	350	-
Max		68	-	0	0	-	400

FIGURE 1



Avon Custom Mixing Service, Inc.
Holbrook, MA
MA0026883

Data from Mass GIS & MA DEP.
All Data Subject to Revision

For Intra-Agency Policy Deliberations

N
W E
S

4/11/07, Massachusetts DEP